PRICEWATERHOUSECOOPERS

CITY OF GLOUCESTER
CONTRIBUTORY RETIREMENT SYSTEM

Actuarial Valuation Report

January 1, 2001

TABLE OF CONTENTS

Report Summary:

Highlights	**January 1, 1998**	**January 1, 2001**
Contributions		
Funding Schedule FY 2002	$2,916,000	$3,336,091
Funding Schedule FY 2003	3,018,000	3,455,204
Funded Ratios		
GAS No. 25	62.1%	59.9%
Participants		
Actives	527	578
Inactives	47	74
Retirees and Beneficiaries	319	327
Disabilities	70	73
Total	963	1,052
Payroll		
Payroll of Active Members	$16,252,794	$19,438,637
Average Payroll	30,840	33,631
Normal Cost		
Employer	943,996	947,538
Employee	1,194,938	1,575,313
Administrative Expenses	100,000	150,000
Total	2,238,934	2,672,851
Actuarial Accrued Liabilities		
Actives	26,261,282	37,689,782
Retirees, Beneficiaries, Disabilities and Inactives	32,121,635	43,613,267
Total	66,810,525	81,303,049
Actuarial Value of Assets	41,461,962	48,732,849
Unfunded Actuarial Accrued Liabilities	$25,348,563	$32,570,200

Introduction

This report presents the City of Gloucester actuarial valuation findings as of January 1, 2001, under the Commonwealth of Massachusetts Retirement System.

The actuarial valuation is based on:

- Provisions Chapter 32 of the Massachusetts General Laws "M.G.L", as of January 1, 2001.
- Employee data provided by the Retirement Board
- Asset information reported to the Public Employees' Retirement Administration Commission by the City of Gloucester Contributory Retirement System
- Actuarial assumptions approved by the Retirement Board

The valuation and appropriation forecast are prepared in accordance with Chapter 32 of the M.G.L. as of January 1, 2001. It assumed the new annual cost-of-living adjustments (COLA) of 3.00%.

The valuation and forecast do not account for:

- Any other subsequent changes in the law
- Chapter 32 of the M.G.L., Section 3(8)(c) transfers between systems
- State-mandated benefits
- Cost-of-living increases granted to retired members between 1982 and 1997. The cost of these benefits has been assumed by the State under Proposition Two and One-Half.

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last three years since the last actuarial valuation, the total unfunded actuarial accrued liability increased by 28.5% to $32,570,200. The increase is the result of net unfavorable actuarial experience during the preceding years. The primary component of the unfavorable experience was an annual investment return lower than the 8.5% assumption.

Actuarial Costs and Liabilities:

Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	January 1, 1998	January 1, 2001
Superannuation	$1,404,400	$1,988,100
Death	140,157	183,745
Disability	232,714	267,267
Terminations	108,207	83,739
COLA	253,456	N/A
Administrative Expenses	100,000	150,000
Total Normal Cost	2,238,934	2,672,851
% of Pay	13.8%	13.8%
Employee Contributions	1,194,938	1,575,313
% of Pay	7.4%	8.1%
Employer Normal Cost	$1,043,996	$1,097,538
% of Pay	6.4%	5.6%

Present Value of Actuarial Accrued Liabilities

The present value of actuarial accrued liabilities (AAL) represents today's value of all benefits earned by the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	January 1, 1998	January 1, 2001
Actives		
Superannuations	$23,875,975	$33,743,704
Death	1,485,506	1,987,856
Disability	1,130,745	2,043,183
Terminations	(230,944)	(84,961)
COLA	3,142,912	N/A
Inactives		
Retirees	23,353,466	32,599,684
Disabled Retirees	8,244,788	10,170,000
Inactives	523,381	843,583
COLA	5,284,696	N/A
Total	$66,810,525	$81,303,049

- -

Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactives as well as all benefits earned and expected to be earned in the coming years by the actives. The difference between the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	January 1, 1998	January 1, 2001
Actives		
Superannuation	$39,071,567	$55,136,841
Death	2,998,314	3,966,133
Disability	3,662,333	5,023,345
Terminations	1,006,544	886,243
COLA	5,119,316	N/A
Inactives		
Retirees	23,353,466	32,599,684
Disabled Retirees	8,244,788	10,170,000
Inactives	523,381	843,583
COLA	5,284,696	N/A
Total	$89,264,405	$108,625,829

- -

Funded Status and Appropriations:

Market Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	January 1, 1998	January 1, 2001
Cash equivalents	$697,264	$856,920
Short term investments	0	0
Fixed income securities	14,339,548	13,304,207
Equities	15,157,833	11,720,407
Mutual Real Estate Fund	4,749,632	5,739,086
Mutual Venture Capital	1,933,042	5,126,849
Other	2,889,856	10,399,182
International	0	0
Accounts receivable	1,487,912	1,426,086
Accounts payable	0	(13,516)
Accrued income	206,875	173,628
Total Market Value	$41,461,962	$48,732,849
Total Actuarial Value	$41,461,962	$48,732,849

Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL and the UAAL will be eliminated. Thereafter annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table V.

Table V

	January 1, 1998	January 1, 2001
Actuarial Accrued Liability	$66,810,525	$81,303,049
Actuarial Assets	41,461,962	48,732,849
Unfunded Actuarial Accrued Liability	$25,348,563	$32,570,200
Funded Status	62.1%	59.9%

- -

Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the requirements set forth in Section 22D of Chapter 32 of the Massachusetts General Laws. These amounts were calculated to comply with the June 30, 2028, full funding mandate for all accrued liabilities. The pension appropriation is the sum of the:

- Employer normal cost
- Increasing amortization of the prior unfunded actuarial accrued liability by June 30, 2028
  $ 32,570,200 over 27 years with 4.0 % increasing payments
- Interest adjustment for payments contributed monthly over fiscal year.

The pension appropriation is shown in Table VI.

Table VI

	January 1, 1998	January 1, 2001
Normal cost	$1,382,489	$1,097,538
Amortization payment of the prior accrued liability	0	1,982,554
Amortization payment of ERI	0	0
Amortization payment of current (gains)/losses	(199,733)	0
Total cost	$1,182,756	$3,080,092
% of Pay	14.9%	15.8%
Fiscal 2002 cost	$2,916,000	$3,336,091
Fiscal 2003 cost	$3,018,000	$3,455,204

- -

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 5.5% per year. The employee contribution rate is expected to increase to 10.5% by 2028 with replacement of members contributing 5%, 7%, and 8% with those contributing 9%. Payments are assumed to be spread over the fiscal year.

The employer total cost is expected to increase during the next 27 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost increase represents on average about 15% of payroll and will decrease to 13.3% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 3.5% thereafter. The decrease in the cost as a percentage of payroll is a result of the increase in member deductions.

gloucester.doc

Appropriation Forecast
(amounts in thousands)

Fiscal Year Ending	Payroll*	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %**
2002	$19,439	$1,575	$1,189	$2,147	$3,336	17.2	59.9
2003	20,313	1,665	1,222	2,233	3,455	17.0	61.3
2004	21,227	1,759	1,256	2,323	3,578	16.9	62.6
2005	22,183	1,859	1,290	2,415	3,706	16.7	64.0
2006	23,181	1,964	1,325	2,512	3,837	16.6	65.4
2007	24,224	2,075	1,361	2,613	3,973	16.4	66.8
2008	25,314	2,191	1,396	2,717	4,114	16.3	68.2
2009	26,453	2,314	1,433	2,826	4,259	16.1	69.5
2010	27,644	2,444	1,470	2,939	4,409	15.9	70.9
2011	28,888	2,581	1,507	3,056	4,563	15.8	72.3
2012	30,188	2,725	1,545	3,179	4,723	15.6	73.7
2013	31,546	2,876	1,583	3,306	4,889	15.5	75.1
2014	32,966	3,036	1,621	3,438	5,059	15.3	76.5
2015	34,449	3,204	1,660	3,575	5,235	15.2	77.8
2016	35,999	3,382	1,698	3,718	5,417	15.0	79.2
2017	37,619	3,569	1,737	3,867	5,605	14.9	80.6
2018	39,312	3,766	1,776	4,022	5,798	14.7	82.1
2019	41,081	3,973	1,815	4,183	5,998	14.6	83.5
2020	42,930	4,191	1,854	4,350	6,204	14.5	85.0
2021	44,862	4,421	1,893	4,524	6,417	14.3	86.6
2022	46,880	4,663	1,931	4,705	6,636	14.2	88.1
2023	48,990	4,918	1,969	4,893	6,862	14.0	89.7
2024	51,195	5,187	2,007	5,089	7,096	13.9	91.4
2025	53,498	5,469	2,044	5,293	7,336	13.7	93.0
2026	55,906	5,767	2,080	5,504	7,584	13.6	94.7
2027	58,422	6,080	2,115	5,724	7,839	13.4	96.5
2028	61,051	6,410	2,149	5,953	8,103	13.3	98.2
2029	63,798	6,699	2,246	0	2,246	3.5	100.0
2030	66,669	7,000	2,347	0	2,347	3.5	100.0
2031	69,669	7,315	2,453	0	2,453	3.5	100.0
2032	72,804	7,644	2,563	0	2,563	3.5	100.0
2033	76,080	7,988	2,678	0	2,678	3.5	100.0

* Calendar basis

** As of beginning of the Fiscal Year

GAS No. 25 and GAS No. 27

Effective for periods beginning after June 15, 1997, the Governmental Accounting Standards Board (GASB) requires the disclosure of pension related liabilities for public employer financial statements in accordance with Statements 25 and 27. These statements, which replace GAS Statement No. 5, must be adhered to by any public employee retirement system that follows Generally Accepted Accounting Principles (GAAP).

These disclosures are intended to establish a reporting framework that distinguishes between:

- current financial information about plan assets and financial activities,
- actuarially determined information from a long-term perspective,
- the funded status of the plan, and
- progress being made in accumulating sufficient assets to pay benefits when due.

Footnote disclosures required by GASB Statement No. 25 and 27 include a description of the plan, a summary of significant accounting policies, and information about contributions, legally required reserves, and investment concentrations. As a result of the oversight of the Public Employees Retirement Administration Commission (PERAC) and the conversion of unpaid contributions to pension related debt, the Net Pension Obligation (NPO) as required by Statement No. 27 will effectively always be equal to $0. The required disclosure information is shown in Table VII.

Table VII

		January 1, 1998	January 1, 2001
(1)	Actuarial Accrued Liability	$66,810,525	$81,303,049
(2)	Actuarial Value of Assets	41,461,962	48,732,849
(3)	Unfunded Actuarial Accrued Liability	25,348,563	32,570,200
(4)	Funded Ratio (2)/(1)	62.1%	59.9%
(5)	Covered Payroll	$16,252,794	$19,438,637
(6)	UAAL as a percentage of payroll: (3)/(5)	156.0%	167.6%
(7)	Annual Required Contribution (ARC)	$2,632,736	$3,336,091
(8)	Net Pension Obligation	$0	$0
-	-		

PERAC Annual Statement
APPENDIX PAGE 3
ACTUARIAL VALUATION AND ASSUMPTIONS

The most recent actuarial valuation of the System was prepared by PricewaterhouseCoopers LLP as of January 1, 2000.

The normal cost for employees on that date was:	$1,575,313	8.1% of pay
The normal cost for the employer was:	947,538	4.9% of pay

The actuarial liability for active members was:	$37,689,782
The actuarial liability for retired members was:	43,613,267
Total actuarial accrued liability:	81,303,049
System assets as of that date:	48,732,849
Unfunded actuarial accrued liability:	$32,570,200

The ratio of system's assets to total actuarial liability was 59.9%

The principal actuarial assumptions used in the valuation are as follows:

Investment Return:	8.5%
Rate of Salary Increase:	5.5%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (b)	Unfunded Actuarial Accrued Liability (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a percent of Covered Payroll (b-a)/c
01/01/01	$48,732,849	$81,303,049	$32,570,200	59.9%	$19,438,637	167.6%
01/01/98	41,461,962	66,810,525	25,348,563	62.1%	16,252,794	156.0%
01/01/96	30,892,058	50,933,013	20,040,955	60.7%	14,955,527	134.0%
01/01/93	23,537,381	53,593,645	30,056,264	43.9%	11,057,502	271.8%

EXHIBITS

Age/Service Distribution with Salary as of January 1, 2001

Attained	Average Salary									
Age	<5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
20-24	6	0	0	0	0	0	0	0	0	6
	17,736	0	0	0	0	0	0	0	0	17,736
25-29	18	3	0	0	0	0	0	0	0	21
	26,616	31,459	0	0	0	0	0	0	0	27,308
30-34	30	13	2	0	0	0	0	0	0	45
	30,698	37,822	34,778	0	0	0	0	0	0	32,937
35-39	37	19	9	3	0	0	0	0	0	68
	31,096	37,116	40,577	44,305	0	0	0	0	0	34,616
40-44	37	20	13	11	2	0	0	0	0	83
	26,184	28,343	37,583	44,907	42,154	0	0	0	0	31,356
45-49	39	21	16	15	9	0	0	0	0	100
	24,642	26,593	29,210	42,938	47,709	0	0	0	0	30,603
50-54	22	26	20	8	11	24	2	0	0	113
	29,787	26,874	27,634	35,296	43,519	43,924	45,331	0	0	33,740
55-59	20	10	9	9	6	15	10	0	0	79
	24,137	32,935	33,305	31,196	26,939	42,021	44,313	0	0	33,261
60-64	6	10	12	3	0	7	6	2	0	46
	25,533	30,623	21,865	35,644	0	24,935	42,701	61,414	0	30,050
65-69	2	1	1	0	0	6	1	0	0	11
	7,696	26,443	11,186	0	0	28,026	39,580	0	0	23,705
70+	1	3	1	0	1	0	0	0	0	6
	23,148	27,211	30,913	0	27,459	0	0	0	0	27,192
Total Employees	218	126	83	49	29	52	19	2	0	578
Average Salary	27,141	30,627	30,694	39,613	40,741	38,984	43,662	61,414	0	31,878

Retiree Distribution as of January 1, 2001

Attained Age	Number of Employees: Male	Number of Employees: Female	Number of Employees: Total	Total Payments: Male	Total Payments: Female	Total Payments: Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	1	0	1	6,798	0	6,798
35-39	0	0	0	0	0	0
40-44	0	0	0	0	0	0
45-49	1	0	1	6,499	0	6,499
50-54	5	0	5	103,344	0	103,344
55-59	8	1	9	248,099	3,515	251,613
60-64	31	11	42	677,893	87,273	765,166
65-69	31	20	51	587,640	200,980	788,620
70-74	44	37	81	633,053	293,581	926,634
75-79	28	18	46	351,394	161,845	513,239
80-84	36	14	50	281,682	53,715	335,397
85-89	16	14	30	133,495	66,727	200,221
90-94	6	2	8	34,071	6,640	40,711
95-99	2	1	3	4,001	4,342	8,342
Total	209	118	327	3,067,969	878,617	3,946,586
Average (Age/Payment)	73.3	74.6	73.7	14,679	7,446	12,069
Frequency Percent	63.9	36.1	100	77.7	22.3	100

Disabled Retiree Distribution as of January 1, 2001

Attained Age	Number of Employees Male	Number of Employees Female	Number of Employees Total	Total Payments Male	Total Payments Female	Total Payments Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	0	0	0	0	0	0
40-44	4	0	4	81,400	0	81,400
45-49	0	0	0	0	0	0
50-54	8	1	9	169,963	19,601	189,564
55-59	9	1	10	231,999	5,132	237,130
60-64	8	0	8	203,321	0	203,321
65-69	10	0	10	222,079	0	222,079
70-74	12	2	14	144,859	7,713	152,572
75-79	15	0	15	246,119	0	246,119
80-84	3	0	3	38,883	0	38,883
85-89	0	0	0	0	0	0
90-94	0	0	0	0	0	0
95-99	0	0	0	0	0	0
Total	69	4	73	1,338,622	32,446	1,371,068
Average (Age/Payment)	66.3	63.4	66.1	19,400	8,111	18,782
Frequency Percent	94.5	5.5	100	97.6	2.4	100

EXHIBIT 4 - DISTRIBUTION FORECAST:

Based on a closed group, the following is a 30 year forecast of benefit payments net of state reimbursable COLA payments.

Fiscal Year Ending	Estimated Benefit Payments *
2002	5,040
2003	5,253
2004	5,502
2005	5,751
2006	6,034
2007	6,319
2008	6,669
2009	7,062
2010	7,441
2011	7,875
2012	8,384
2013	8,930
2014	9,485
2015	9,999
2016	10,482
2017	11,020
2018	11,591
2019	12,176
2020	12,662
2021	13,144
2022	13,636
2023	14,081
2024	14,526
2025	14,945
2026	15,293
2027	15,638
2028	16,019
2029	16,351
2030	16,541
2031	17,097

*** amounts in thousands**

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Chapter 32 as of January 1, 2001, and does not take into account any subsequent changes.

1. Administration

Each of the 107 contributory retirement systems for public employees for the Commonwealth of Massachusetts are guided by the applicable provisions of Chapter 32 of the Massachusetts General Laws and other applicable statutes. Although these boards operate semi-independently, there is a uniform set of rules governing benefits, eligibility, contributions, financing, and accounting.

2. Participation

Participation is mandatory for all full-time employees whose employment commences prior to age 65. Eligibility with respect to part-time, professional, temporaries, or intermittent employment is governed by the local board. Membership is optional for certain elected officials, State officials appointed by the Governor, and certain hospital interns.

There are four classes of membership as follows:

(i) Group 1: Most general employees in State and local government

(ii) Group 2: Certain specified hazardous duty positions

(iii) Group 3: State police officers and inspectors

(iv) Group 4: Local police officers, firefighters, and designated employees of the municipal light department.

For members in more than one group, participation will be proportional.

3. Salary

Salary is defined as gross regular compensation. Salary does not include bonuses, overtime, severance pay, unused sick leave credit, or other similar compensation.

4. Member Contributions

Member contributions vary depending upon date hired as follows:

Date of Hire	Member Contribution Rate
Prior to 1975	5.0% of Salary
1975 to 1983	7.0% of Salary
1984 to 1996	8.0% of Salary
1996 and Later plus	9.0% of Salary
1979 and Later	2.0% of Salary in excess of $30,000

5. Average Salary

Average salary is used to determine a participant's benefit. It is defined as the average salary during the three consecutive-year period that produces the highest average. (Alternatively, if a greater amount results, it is the average rate of salary earned during the period or periods, whether or not consecutive, that constitutes the last three years preceding retirement.)

6. Creditable Service

In general, creditable service is awarded during the period in which a member contributes to the retirement system.

7. <u>Service Retirement</u>

a. <u>Eligibility</u>:

For an employee to be eligible for service retirement (also referred to as superannuation), the following conditions are to be met:

(i) completion of 20 years of service

(ii) for an employee prior to January 1, 1978, attainment of age 55 as an active member

(iii) for an employee on or after January 1, 1978, attainment of age 55 as an active member and completion of ten years of service

(iv) if an employee is a State police officer (Group 3), attainment of age 50

b. Benefit Amount:

The retirement allowance is determined as a product of the participant's Benefit Rate times Average Salary times Creditable Service, where Benefit Rate is determined from the following table:

Age at	Percentage of Average Salary		
Retirement	Group 1	Group 2	Group 4
65 or Over	.025	.025	.025
64	.024	.025	.025
63	.023	.025	.025
62	.022	.025	.025
61	.021	.025	.025
60	.020	.025	.025
59	.019	.024	.025
58	.018	.023	.025
57	.017	.022	.025
56	.016	.021	.025
55	.015	.020	.025
54	.014	.014	.024
53	.013	.013	.023
52	.012	.012	.022
51	.011	.011	.021
50	.010	.010	.020
49	.009	.009	.019
48	.008	.008	.018
47	.007	.007	.017
46	.006	.006	.016
45	.005	.005	.015
44	.004	.004	.004
43	.003	.003	.003
42	.002	.002	.002
41	.001	.001	.001

For Group 3 (State police), the benefit is 50% of the participant's final year's rate of regular salary, plus an additional 1% for each year of service in excess of 20 years. In addition, for veterans (all groups) there is an additional benefit of $15 per year for each year of service, up to a maximum of 20 years of service.

8. Deferred Vested Retirement

a. Eligibility:

A participant who has completed ten or more years of creditable service is eligible for a deferred vested retirement benefit. If termination is involuntary, the participant is vested after 6 years.

b. Benefit Amount:

The participant's accrued benefit is payable commencing at age 55, or may be deferred until later at the employee's option.

c. Refund of Contributions:

In lieu of the deferred pension benefit, a member may elect to receive a refund of their accumulated contributions. Members with ten or more years of service are entitled to 100% of the credited interest on their contributions. Members with five to ten years of service are entitled to 50% of the credited interest on their contributions. No credited interest is provided for members with less than five years of service.

9. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 72% of annual salary plus $450 per year for each child plus an additional annuity based upon accumulated Member Contributions with credited interest.

10. Ordinary Disability

a. Eligibility:

An ordinary disability occurs when a member becomes permanently and totally disabled due to sickness or injury that is not job related. In order to be eligible for an ordinary disability benefit, a member must have ten years of service (and be less than age 55).

b. Benefit Amount:

The ordinary disability amount is equal to the accrued retirement benefit as if the member were age 55. If the member was a veteran, the benefit is 50% of the member's final rate of Salary during the preceding 12 months, plus an annuity based upon accumulated Member Contributions plus credited interest. If the participant is over age 55, he will receive not less than the superannuation allowance to which he is entitled.

11. Survivor Benefits

a. Occupational Death:

The survivors of a member who dies due to an occupational injury will be entitled to a lump sum return of contributions plus a pension benefit equal to 72% of the participant's annual Salary.

b. Non-Occupational Death:

Upon the death of a member other than due to an occupational injury, the designated beneficiary will be entitled to a retirement benefit as if Option C had been elected with a minimum of $250 per month to the surviving spouse, plus $120 for the first child, plus $90 for each additional child. If no beneficiary is designated and if the employee worked two years, and is married at least one year, the spouse may elect benefits. If there is no designated beneficiary or surviving spouse, then member contributions are returned. If there are dependent children but no surviving spouse, they may elect minimum survivor benefits of $250 per month plus $120 for the first child and $90 for each additional child.

c. Refund of Contributions:

Upon the death of a member not entitled to survivor benefits, the beneficiary is entitled to a refund of all member contributions with interest.

12. Cost-of-Living Increases

In accordance with the adoption of Chapter 17 of the Acts of 1997 the granting of a cost-of-living adjustment will be determined by an annual vote by the Retirement Board. The amount of increase will be based upon the Consumer Price Index, limited to a maximum of 3.0%, beginning on July 1. All retirees, disabled retirees, and beneficiaries who have been receiving benefits payments for at least one year as of July 1 are eligible for the adjustment. The maximum pension benefit on which a COLA may be granted is $12,000. All COLA's granted to members after 1981 and prior to July 1, 1998 are deemed to be an obligation of the State and are not the liability of the Retirement System.

13. Postretirement Death Benefits

Any benefits following the death of a member after retirement are based upon the form of benefit the participant elected at the time of retirement. There are three available forms as follows:

(i) Option A – Life annuity

(ii) Option B – Life annuity with death benefit equal to excess of member contributions plus credited interest to retirement over annuity benefit paid to member

(iii) Option C – Life annuity with 66-2/3% of benefit continued after death of member to designated joint annuitant

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. Valuation Date

January 1, 2001.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 8.5% per annum.

5. Salary Scale

It is assumed that salaries including longevity will increase at a rate of 5.5% per year.

6. Cost-of-Living Increases

Cost-of-living increases have been assumed to be 3.0% of the lessor of the pension amount and $12,000 per year.

7. $30,000 Pay Cap

The $30,000 salary cap no longer applies for purposes of benefit determination.

8. Value of Investments

Assets held by the fund are valued at market value as reported by the Public Employees' Retirement Administration Commission (PERAC).

9. Annual Rate of Withdrawal Prior to Retirement

Based on an analysis of experience, the assumed annual rates of withdrawal may best be illustrated by the following rates at the following ages:

Age	General Employees	Police and Fire Employees
20	0.1200	0.0210
30	0.0555	0.0165
40	0.0231	0.0056
50	0.0146	0.0000

10. Annual Rate of Mortality

It is assumed that both preretirement and postretirement mortality are represented by the 1983 Group Annuity Mortality Table (with margin) for males and females. Mortality for disabled members is represented by the 1983 Annuity Mortality Table set forward ten years for all disabled members.

11. Service Retirement

Based on an analysis of experience, the assumed annual retirement rates are illustrated at the following ages:

Age	General Employees	Police and Fire Employees
50	0.0000	0.1000
51	0.0000	0.0200
52	0.0000	0.0200
53	0.0000	0.0200
54	0.0000	0.0200
55	0.1255	0.2500
56	0.0321	0.0500
57	0.0310	0.0500
58	0.0334	0.0500
59	0.0348	0.0500
60	0.0784	0.2500
61	0.0692	0.0500
62	0.1511	0.0500
63	0.1071	0.0500
64	0.1037	0.0500
65	0.3568	1.0000
66	0.2214	1.0000
67	0.2159	1.0000
68	0.2164	1.0000
69	0.2536	1.0000
70	1.0000	1.0000

12. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following probabilities at the following ages:

Attained Age	General Employees	Police and Fire Employees
20	0.00015	0.00050
30	0.00028	0.00114
40	0.00055	0.00434
50	0.00153	0.00750

In addition, it is assumed for the general employees that 45% of all disabilities are ordinary (55% are service connected). For police and fire employees, 10% of all disabilities are assumed to be ordinary (90% are service connected).

13. Family Composition

It is assumed that 80% of all members will be survived by a spouse and that females (males) are three years younger (older) than members.

14. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2001 is $150,000 and is anticipated to increase at 4.5% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. <u>Actuarial Accrued Liability</u>

That portion of the Actuarial Present Value of plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. <u>Actuarial Assumptions</u>

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. <u>Actuarial Cost Method</u>

A procedure for allocating the Actuarial Present Value of pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. <u>Actuarial Present Value</u>

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. <u>Forecast</u>

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the City of Gloucester Contributory Retirement System contributing as of January 1, 2001, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost is reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

PricewaterhouseCoopers LLP

____

Daniel W. Sherman, ASA, MAAA
Enrolled Actuary No. 99-4086

October 2001

BREAKOUTS